The EEF guide to supporting early-stage programme development

Education Endowment Foundation

About the Education Endowment Foundation

The Education Endowment Foundation (EEF) is an independent charity dedicated to breaking the link between family income and educational achievement. We do this by supporting schools, colleges, and early years settings to improve teaching and learning through better use of evidence.

Acknowledgements

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Supporting evidence-informed programme design

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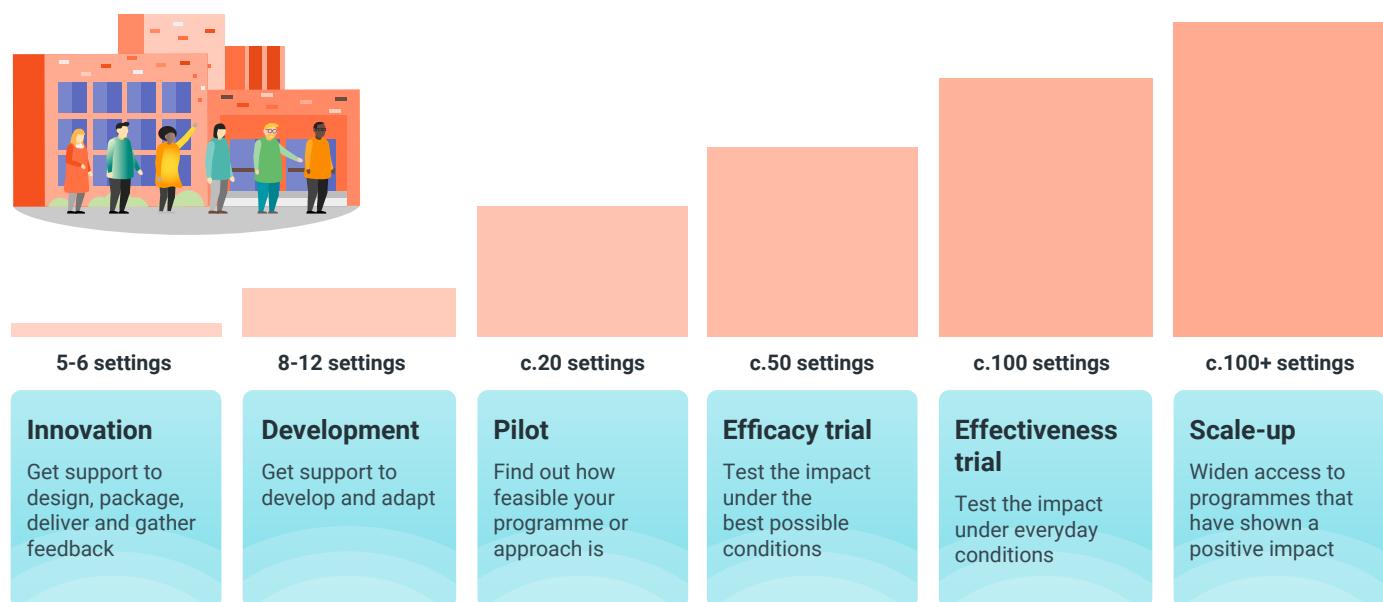Supporting evidence-informed programme design

Lessons from EEF's early-stage programme development

Programme development is hard. It takes patience, time and openness. Well-designed programmes have the potential to support children and young people to improve their outcomes and to help reduce the attainment gap between socio-economically disadvantaged pupils and their classmates.

Increasingly there is useful evidence that can support the design of new programmes, both in content (what actions and pedagogies are likely to have a positive impact if encouraged) and process (how best to support schools and educators to use the approach).

At the Education Endowment Foundation (EEF), we've expanded our work supporting programmes at an earlier stage of their development. This is in recognition that iteration and refinement are crucial in the early stages of programme development to help create potentially promising programmes for future delivery and evaluation.

We've distilled five key lessons to help others in developing or refining programmes, or adapting existing programmes to new contexts. These come from our work in the innovation and development stages of our programmes pipeline.

5-6 settings	8-12 settings	c.20 settings	c.50 settings	c.100 settings	c.100+ settings
Innovation Get support to design, package, deliver and gather feedback	**Development** Get support to develop and adapt	**Pilot** Find out how feasible your programme or approach is	**Efficacy trial** Test the impact under the best possible conditions	**Effectiveness trial** Test the impact under everyday conditions	**Scale-up** Widen access to programmes that have shown a positive impact

The approach we have taken isn't perfect, but we hope that the five key lessons outlined in this guide might be useful to people thinking about designing and adapting programmes.

For this guide, we've used a simple definition of a programme: a set of things you hope educators do (behaviours) + how you support them to do it (implementation strategies).

When starting to think about programme design, there are often a range of ideas of what you might want to achieve, how you might want to do it, and who might be involved. An understanding of behaviour change and implementation is helpful to establish before beginning to design your programme.

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Use behavioural science to be specific and prioritise effort

Most things in schools or settings happen because someone does something to change the experience of children and young people. While this might be caused by a range of factors or influences, much of the time these changes are about pedagogy, **the teaching and learning behaviours enacted by educators to support learners.**

At the heart of programme design should be a laser-like focus on the behaviours to be enacted to help children learn and develop in the way you aspire.

The evidence base can be a useful place to start to understand the behaviours and groups of behaviours that might be likely to be most effective. Useful summaries of the evidence include our **Teaching and Learning Toolkit, Early Years Evidence Store** or suite of **Guidance Reports.**

For example, if you're designing a literacy programme for the early years, consider what the evidence says about the approaches that support children's learning and therefore what behaviours you'd like educators to enact, such as interactive reading or teaching sound manipulation.

One model for programme design that we've found helpful is the COM-B (capability, opportunity, motivation -> behaviour) model (Michie et al)*. Even in a simplified format, it helps describe the factors that affect someone's behaviour: the ingredients that a programme needs to change behaviours.

COM-B model
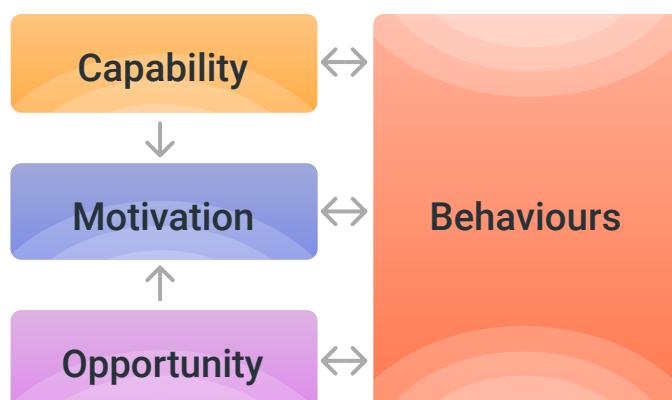
*Michie, S., van Stralen, M.M. & West, R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Sci 6, 42 (2011). https://doi.org/10.1186/1748-5908-6-42

Think about:

- How able are the people undertaking the change? Is there specific knowledge that practitioners need to do the behaviour? *capability influences*

- Do practitioners believe that the behavour will make a difference to pupils? For example, do they dislike the old approach to homework, so they are excited about making a change to how homework is implemented? Are they supported and rewarded? *motivation influences*

- Do practitioners have the right set of circumstances to practice the change? Are there resources, and time available? *opportunity influences*

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Use a Theory of Change as a design process

A Theory of Change (ToC) is a 'big picture' of your programme. It's a way of thinking through and describing how the different elements of your programme should work together. There is considerable wider literature on ToCs, and we have a model we use to support programmatic evaluation.

However, ToCs can be a useful way to structure the design process: a way of systematically thinking through how you will address an educational challenge and achieve a particular change. Even if you have already thought about this, breaking it down and looking at how the different aspects of your programme interact can be helpful.

Creating a ToC will also help you with feedback planning (which we cover in section 3) to understand how your programme works.

Breaking down your Theory of Change

- What is the problem you are trying to solve with your programme? Why is your programme needed? **(challenge)**

- Who will benefit from your programme? Which specific children and young people does your programme aim to reach? **(target group)**

- What is the ultimate, long-term goal of your programme? **(aim)**

Then, think about what changes you hope to see in pupils on the way to achieving your aim.

- These changes might be a difference in pupils' thinking or knowledge, their feelings, or their behaviours.

- These changes might happen right away after pupils receive a particular intervention, they could happen over the duration of the programme, or at the end.

Next, think about the behaviour changes you hope to see in practitioners, or other relevant stakeholders, to achieve the changes in pupil behaviour that you have identified.

- Try to think about what activities practitioners may need to carry out, how often and for how long.

Challenge   **Target Group**

Implementation strategies	Intermediate outcomes (practitioners)	Teaching and learning behaviours	Intermediate outcomes (pupils/children)	Aim

We've shared an example challenge definition, based on a programme developed by the EEF's East London Research School:

- In England, gaps in maths attainment between lower and higher attainers is very wide by international standards. Gaps in numeracy skills at the end of the Early Years Foundation Stage (EYFS) double by the end of primary school. Most children don't catch up. This disproportionately affects disadvantaged children.

After describing the wider context of their challenge, they made this more specific by describing how this challenge manifests in a particular demographic and impacts learning in a particular subject area.

- Children in Reception identified by teachers as needing targeted help to secure their basic understanding of number and operations in order to be ready for Key Stage 1.

Their aim was that:
Children identified as having low numeracy skills have a secure understanding of number and operations by the end of Reception and an appropriate level of maths knowledge to progress to Key Stage 1.

Three of the outcomes among pupils that they expected to occur on the way to achieving this aim were:

- Pupils understand the maths concepts from EYFS they are exposed to through picture books.

- Pupils engage in dialogue about number and operations.

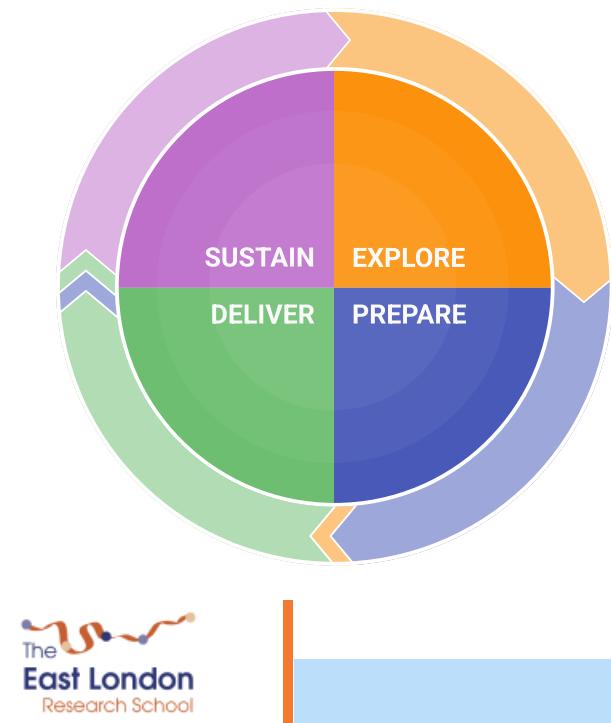- Pupils enjoy participating in maths lessons.
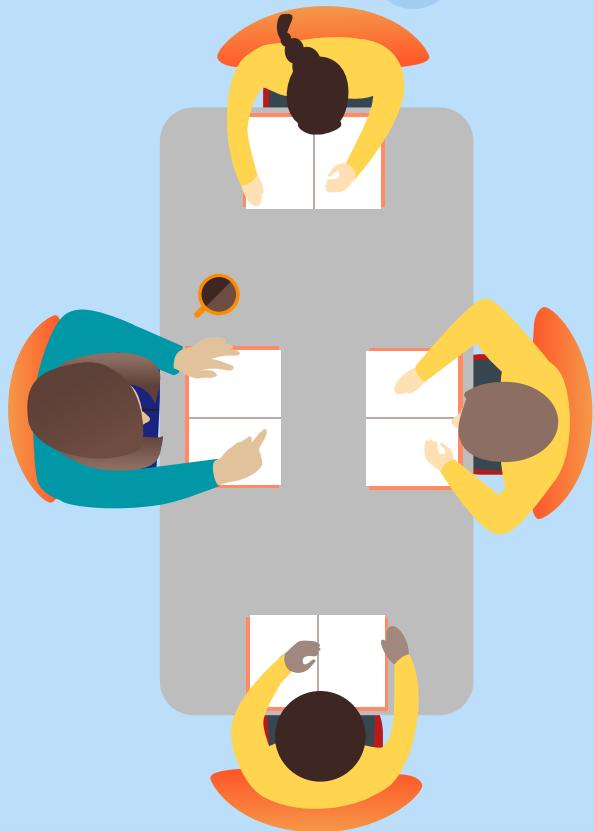
They defined the core behaviours that they wanted to support practitioners to enact as:

- Teaching assistants deliver three 20-minute dialogic reading sessions to selected pupils each week for seven weeks (note the specificity around who delivers, what they deliver, to whom, and how often).

- Teaching assistants conduct weekly formative assessment of pupils using the Early Years Toolbox app for seven weeks.

- Teachers and teaching assistants attend weekly meeting to plan and annotate picture books for reading sessions.

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Implementation strategies

Finally, think about what kind of supports and resources you will put in place so that practitioners enact the behaviours as intended. These are the implementation strategies and will help you to think about creating your Theory of Change. The EEF's **Effective Professional Development guidance report** includes some useful prompts to consider.

Putting Evidence to Work – A School's Guide to Implementation outlines the foundations of good implementation:

- Treat implementation as a process, not an event; plan and execute it in stages.

This includes thinking about what your strategy will be throughout the lifespan of a programme, as opposed to front-loading supports for schools/settings with little follow up.

- Create a leadership environment and school climate that is conducive to good implementation.

In the case of programme design, this means thinking about who you engage in your programme implementation – for example, are there members of the senior leadership team or other colleagues that you can involve in creating a supportive climate to implement the programme?

East London Research School included different implementation strategies in their programme design to support practitioners to enact the core behaviours identified above:

- Providing one day of in-person training for teachers and teaching assistants on number, dialogic reading, and assessment.

- Leading three webinars for participating teachers and teaching assistants during delivery that were focused on implementation support and problem-solving, as well as celebrating successes.

- Providing the resources needed to deliver the programme including a programme handbook with a detailed timescale of the programme, picture books, book guides, and modelling videos. They also made all these resources, as well as training recordings, accessible on a central padlet.

They considered how their implementation strategies would link to the behaviour changes that they hope to observe in practitioners by the end of the programme, using the COM-B model to help structure their approach:

- Teaching assistants understand the programme's evidence-based approach to high quality interactions with young people *(capability)*.

- Headteachers schedule time for teaching assistants and teachers to co-plan and deliver the weekly dialogic reading and coaching sessions *(opportunity)*.

- Teaching assistants enjoy the dialogic reading approach *(motivation)*.

Build in feedback planning at an early stage

Gathering feedback can help you understand how the delivery of your programme is going: what is happening in participating settings and what participants think about the programme.

Focusing on practitioner-reported feedback (rather than quantitative data analysis or testing pupil outcomes) makes sense for programmes that are new or developing.

Remember that learning from what's not working well is valuable too and will help you to revisit your Theory of Change, reiterate and deliver an improved version of your programme.

Identify key research questions that you want to be able to answer.

These example research questions prioritise an understanding of whether a programme can be delivered and whether it is likely to be delivered consistently across multiple settings:

- Is the programme being delivered as intended? For example, are a minimum of three sessions being delivered a week or are practitioners following the activities they need to deliver in the correct order?

- To what extent is the programme suitable and acceptable to education settings and practitioners? What do practitioners feel works well and what could be improved? For example, how useful did they find the training, what are their views on the specific materials you've produced?

- To what extent is the time, commitment or resources required to deliver the programme able to be accommodated by settings? For example, how easy or difficult do practitioners find it to fit the sessions into the curriculum?

  Does the programme "work" better or worse in some settings? If so, why? What factors influence it? Do settings have different experiences of delivery?

Identify suitable ways of collecting feedback to help answer your research questions

This could include surveys, interviews or focus groups, and observation checklists. It's usually helpful to collect a mix of closed responses – which can include yes/no answers, or from a multiple-choice list which can be easily compared across participants – as well as open-ended responses where participants can share more detail.

You should also consider the burden on both participants and for you, as to how much data you can manageably collect and process in the time that you have available. Some of the feedback tools that you could consider using include:

- Practitioner and teaching staff surveys. These should be undertaken before delivery to understand more about the settings, practitioners, and what is currently happening, as well as after delivery to collect feedback about experiences delivering the programme.

- Delivery logs. These can help you understand how frequently the programme is being delivered, how long the delivery is taking, as well as practitioners' reflections on how delivery is going.

- Observations (and accompanying forms). These can explore how the delivery is happening, whether the programme materials are used as expected, and how your programme is received by pupils.

- Semi-structured interviews and focus groups with practitioners. These can collect more in-depth and specific feedback on whether the programme and materials are suitable and acceptable to practitioners, and what different enablers and barriers to delivery that they encountered.

A programme developer found that lots of practitioners felt nervous about discussing maths with pupils, and subsequently gave more time to this in their training day.

They used the following research question to find out whether this change had supported practitioners as they hoped: *Are there any early indications that the training day is influencing practitioner confidence in having conversations about number?*

Deliver the programme to a small number of settings

Working with a limited number of settings helps ensure that the process is manageable and allows you to start small and review feedback. This could put you in a better place to deliver your programme to more settings next time, with greater confidence.

For example, you might be a school with an approach that has worked well in your own setting, and you want to now work with a handful of similar settings to see if the approach is feasible more broadly, and how other practitioners experience it. You may also want to consider how experiences of the programme vary for different types of practitioners and settings.

> East London Research School delivered their programme to 10 schools. The key resources that they developed for settings to use were: Programme handbook, picture books, book guides, and modelling videos.
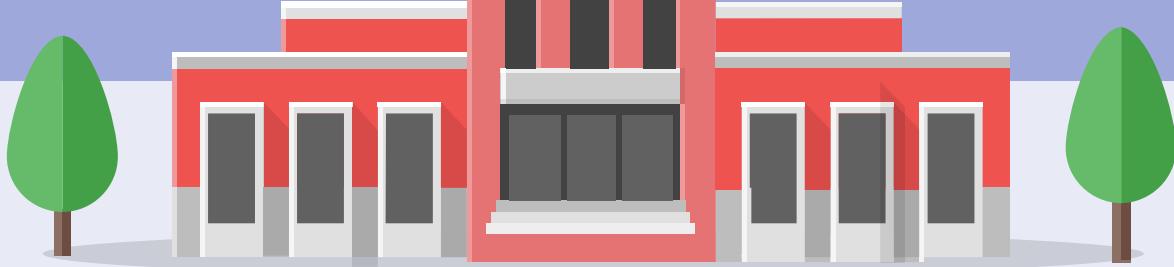
1. Plan when the different elements of your programme will be delivered, including dates for training sessions, the number of weeks that settings should spend running the programme activities and any ongoing support they can access. You could also consider the additional time that you aim to spend collating and analysing feedback.

2. Create your programme resources. Resources which support implementation of the programme may include training slides, online banks of resources, programme handbooks, and video exemplification.

3. Resources to support practitioners in enacting core behaviours may include lesson plans, structured activities in a classroom/setting, education software, manipulatives.

4. Recruit a small number of settings, clearly communicating what you are offering and what the expectation is for participating settings.

5. Provide implementation support and troubleshoot data collection issues.

6. As well as providing support for settings with implementation challenges, check that feedback tools are being used as intended as you begin to receive data. There may be simple troubleshooting that you can do: technical (e.g., issues with accessing an online platform) or changes to content (e.g. survey questions are not understood as intended so later surveys are tweaked).

Reflect to consider future adaptations

Reviewing your feedback in the round can help you identify key threads across your different data.

First, revisit your research questions and consider what conclusions you can begin to draw. Consider compiling your findings into a summary document: for example, frequency and percentage tables related to your research questions, a summary of the key themes coming through from interviews, observations or focus groups.

Compare data sets to assess the strengths and weaknesses to the programme design and implementation.

Next, stop and reflect on the changes that you could make to your programme, based on the feedback you have received. Thinking back to the COM-B model, are there gaps in capability, opportunity or motivation that impacted a practitioner's ability to deliver the programme as intended?

Revisit your Theory of Change and consider what updates may be needed:

- What do you now see as the 'core ingredients' in the programme which should not be changed?

- What went well? Are there any improvements or changes needed?

- Was the programme designed with the right dosage to implement activities or is there more flexibility required?

- To what extent do you feel this programme could or should be implemented elsewhere – for example, in different regions, or different types of setting?

- What barriers to delivery of your programme have you identified? How could these be mitigated these in the future?

- If you were to implement the programme again, what structures and support would need to be in place? (e.g., at a school level, at a teacher level, external support).

Conclusion

We hope that this approach to programme design, delivery and feedback is useful.
After following these steps, we recommend that you continue to develop your programme, based on feedback from settings, in the iterative approach outlined.

The aim of this work is also to position your programme as a promising prospect to secure further funding for a pilot trial, and beyond. Ultimately, we hope that in the future you can undergo an independent evaluation with an increased number of settings to begin to generate more robust evidence about your programme.